

REMARKS

Claims 1, 3, 4, 6-8, 15, 16, 18, 20, and 21 are pending in the application upon entry of the amendments and new claim. Claim 1 has been amended to disclaim the cited art. Claim 21 has been added to further describe certain aspects of the invention. Favorable reconsideration in light of the amendments, the new claim, and the remarks which follow is respectfully requested.

The Amendments to the Claims

Claim 1 has been amended to recite "an outer surface of the porous film and an inside surface of a pore of the porous film are" and "the molecular weight of the cyclic siloxane is from 70 to 900." Support for the amendments exists in the specification, for example, at page 21, line 19 and page 27, lines 21-23. No new matter has been introduced by the claim amendments.

The Anticipation Rejection

Claims 1, 3, 6-8, 15, 18, and 20 have been rejected under 35 U.S.C. §102(e) over Weidman (US Patent No. 6,806,203). Weidman relates to a method of forming a dual damascene structure using an amorphous silicon hard mask.

To establish anticipation, each and every claim feature must be disclosed in a single cited art document. Claim 1 recites "***an outer surface of the porous film and an inside surface of a pore of the porous film are brought into contact with an organic silicon compound, the organic silicon compound is a cyclic siloxane and the molecular weight of the cyclic siloxane is from 70 to 900.***" Since the molecular weight of the cyclic siloxane is from 70 to 900, the cyclic siloxane can enter the pores of the porous film. Contacting both the outer surface of the porous film and the inside surface of the pore of the porous film with the cyclic siloxane, the resultant modified porous film can have excellent hydrophobic property and mechanical strength.

Weidman fails to disclose that an outer surface of the porous film and an inside surface of a pore of the porous film are brought into contact with an organic silicon compound, wherein the organic silicon compound is a cyclic siloxane and the molecular weight of the cyclic siloxane is from 70 to 900. Weidman discloses that a layer 122 is **deposited on** a layer 116 by a non-oxidizing plasma process using TMCTS (Figure 5C; column 8, lines 33-35; column 10, lines 61-67; and Table 1 of Weidman). When the layer 122 is deposited by such a process, the molecular weight of TMCTS is significantly increased. As a result, the TMCTS does not enter pores of layer 116 and TMCTS does not contact an inside surface of the pores of layer 116. Since Weidman discloses deposition of a layer 122 on a layer 116, Weidman teaches away from the claimed method.

Since Weidman fails to disclose each and every claim feature, Weidman cannot anticipate the claims. Accordingly, withdrawal rejection is respectfully requested.

The Obviousness Rejection

Claims 4 and 16 have been rejected under 35 U.S.C. §103(a) over Weidman. To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, the cited art document or documents when combined must teach or suggest all claim features. See MPEP §706.02(j).

As discussed above, Weidman fails to teach or suggest all the claim feature. In particular, Weidman fails to teach or suggest that an outer surface of the porous film and an inside surface of a pore of the porous film are brought into contact with an organic silicon compound, the organic silicon compound is a cyclic siloxane and the molecular weight of the cyclic siloxane is from 70 to 900. Accordingly, withdrawal rejection is respectfully requested.

The New Claim 21

Claim 21 recites "*the relative permittivity of the modified porous film is 2.6 or less.*" Weidman expressly or inherently fails to disclose, teach, or suggest relative permittivity of layer 116 of 2.6 or less.

It is well established principle that inherency must be a necessary result and not merely a possible result. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) and MPEP §2112 IV. The fact that a characteristic may be present in a cited art document is not sufficient to establish inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). In this case, it is uncertain as to whether the layer 116 has the recited specific relative permittivity or not because Weidman is silent as to the relative permittivity of layer 116.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Respectfully submitted,
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